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To: Commissioner for Patents for Examiner William Boddie Group Art Unit 2629	Facsimile No.: 571/273-8300
From: Candace Crawford Legal Assistant to Ted Fay	No. of Pages Including Cover Sheet: 43
Message: Enclosed herewith: <ul style="list-style-type: none">• Transmittal Document; and• Appeal Brief.	
Re: Application No. 10/612,655 Attorney Docket No: 10030189-1	
Date: Monday, October 02, 2006	
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ATTORNEY DOCKET NO. 10030189-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Inventor(s): Marshall Thomas DePue et al.

Serial No.: 10/812,855

Examiner: William Boddie

Filing Date: July 2, 2003

Group Art Unit: 2629

Title: Fuel Cell Powered Optical Navigation Device

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir,

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on July 31, 2006.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.138(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.138 (fees: 37 CFR 1.17(a)(1)-(5)) for the total number of months checked below:

<input type="checkbox"/>	one month	\$ 120.00
<input type="checkbox"/>	two months	\$ 450.00
<input type="checkbox"/>	three months	\$1020.00
<input type="checkbox"/>	four months	\$1590.00

☐ The extension fee has already been filled in this application.

☒ (b) Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 50-3718 the sum of \$500.00. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account 50-3718 pursuant to 37 CFR 1.25.

A duplicate copy of this transmittal letter is enclosed.

Respectfully submitted,

Marshall Thomas DePue et al.

By


Theodore D. Fay III
Attorney/Agent for Applicant(s)

Reg. No. 48,504

Date: October 2, 2006

Telephone No. (972) 385-8777

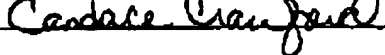
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Docket No. 10030189-1

PATENT**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:
Marshall Thomas DePue et al.
Serial No. 10/612,655

Filed: July 2, 2003

For: **Fuel Cell Powered Optical
Navigation Device**

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Group Art Unit: 2629

Examiner: William Boddie

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on October 2, 2006.
By: Candace Crawford
Candace Crawford

APPEAL BRIEF (37 C.F.R. 41.37)

This brief is in furtherance of the Notice of Appeal, filed in this case on July 31, 2006.

No fees are believed to be required for filing a Supplemental Appeal Brief. If, however, any fees are required, I authorize the Commissioner to charge these fees which may be required to Avago Technologies Deposit Account No. 50-3718. No extension of time is believed to be necessary. If, however, an extension of time is required, the extension is requested, and I authorize the Commissioner to charge any fees for this extension to Avago Technologies Deposit Account No. 50-3718.

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REAL PARTY IN INTEREST

The real party in interest in this appeal is the following party:

Avago Technologies General IP (Singapore) Pte. Ltd. (Company Registration No. 200512430D), a company incorporated under the laws of Singapore whose registered office is at 8 Cross Street, #11-00 PWC Building, Singapore 048424.

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RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such appeals or interferences.

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STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 1-20

B. STATUS OF ALL THE CLAIMS IN APPLICATION

1. Claims canceled: None.
2. Claims withdrawn from consideration but not canceled: None.
3. Claims pending: 1-20.
4. Claims allowed: None.
5. Claims rejected: 1-20.
6. Claims objected to: None.

C. CLAIMS ON APPEAL

The claims on appeal are: 1-20

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STATUS OF AMENDMENTS

A Response after Final Office Action was not filed.

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SUMMARY OF CLAIMED SUBJECT MATTER

A. CLAIM 1 - INDEPENDENT

The subject matter of claim 1 is directed to a wireless optical navigation device comprising an optical position tracking system (Specification, p.1, ll. 19-22; p. 4, ll. 23-25; and Figure 2a, #200), a transmitter electrically coupled to said optical position tracking system (Specification, p. 7, ll. 1-3), and a micro fuel cell electrically coupled to said transmitter and said optical position tracking system (Specification, p. 7, ll. 11-16; and Figure 2b, #270, #290, and #235), said micro fuel cell capable of providing electrical power for said optical position tracking system and said transmitter (Specification, p. 1, ll. 19-24).

B. CLAIM 14 - INDEPENDENT

The subject matter of claim 14 is directed to a method for making a wireless optical navigation device comprising providing an optical position tracking system (Specification, p.1, ll. 19-22; p. 4, ll. 23-25; and Figure 2a, #200), providing a transmitter electrically coupled to said optical position tracking system (Specification, p. 7, ll. 1-3), and coupling a micro fuel cell to said transmitter and said optical position tracking system (Specification, p. 7, ll. 11-16; and Figure 2b, #270, #290, and #235), said micro fuel cell capable of providing electrical power for said optical position tracking system and said transmitter (Specification, p. 1, ll. 19-24).

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GROUND OF REJECTION TO BE REVIEWED ON APPEAL

A. GROUND OF REJECTION 1 (Claims 1-9 and 12-20)

Whether the examiner failed to assert a *prima facie* obviousness rejection of claims 1-9 and 12-20 under 35 U.S.C. § 103(a) over *Derocher et al.*, Mouse Recharging Module, U.S. Patent 6,476,795 (November 5, 2002) (hereinafter "*Derocher*") and *Koripella et al.*, Direct Methanol Fuel Cell System and Method of Fabrication, U.S. Patent 6,387,559 (May 14, 2002) (hereinafter "*Koripella*").

B. GROUND OF REJECTION 2 (Claim 10)

Whether the examiner failed to assert a *prima facie* obviousness rejection of claim 10 under 35 U.S.C. § 103(a) over *Derocher, Koripella, and Hirsch, et al.*, Fuel Delivery Cartridge and Anodic Fuel Receptor for a Fuel Cell, U.S. Patent 6,924,055 (August 2, 2005) (hereinafter "*Hirsch*").

C. GROUND OF REJECTION 3 (Claim 11)

Whether the examiner failed to assert a *prima facie* obviousness rejection of claim 11 under 35 U.S.C. § 103(a) over *Derocher, Koripella, and Peng*, Wireless Mouse Capable of Generating and Accumulating Electrical Energy, U.S. Patent 6,686,903 (February 3, 2004) (hereinafter "*Peng*").

D. GROUND OF REJECTION 4 (Claim 13)

Whether the examiner failed to assert a *prima facie* obviousness rejection of claim 13 under 35 U.S.C. § 103(a) over *Derocher, Koripella, and Freathy et al.*, Wireless Tag and Monitoring Center System for Tracking the Activities of Individuals, U.S. Patent 6,774,797 (August 10, 2004).

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ARGUMENT

A. GROUND OF REJECTION 1 (Claims 1-9 and 12-20)

Applicants address the rejection of claim 1 in three main sections. In section A.1. Applicants address the underlying rejections. In section A.2. Applicants rebut the arguments made by the examiner in the office action of January 12, 2006. In section A.3. Applicants rebut the argument made by the examiner in the final office action of May 31, 2006.

A.1. Response to Rejections

For the reasons presented below, the examiner failed to assert a *prima facie* obviousness rejection of claims 1-9 and 12-20 under 35 U.S.C. § 103(a) over *Derocher* and *Koripella*.

Claim 1 is a representative claim of this grouping of claims. Claim 1 is as follows:

1. A wireless optical navigation device comprising:
an optical position tracking system;
a transmitter electrically coupled to said optical position tracking system; and
a micro fuel cell electrically coupled to said transmitter and said optical position tracking system, said micro fuel cell capable of providing electrical power for said optical position tracking system and said transmitter.

Regarding claim 1 the examiner states that:

2. Claims 1-9, 12, and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Derocher* et al. (US 6,476,795) in view of *Koripella* et al. (US 6,387,559).

With respect to claim 1, *Derocher* discloses, a wireless optical navigation device (fig. 2) comprising: an optical position tracking system (col. 3, lines 40-43); a transmitter electrically coupled to said optical position tracking system (52 in fig. 2).

Derocher does not expressly disclose a micro fuel cell electrically coupled to said transmitter and said optical position tracking system, said micro fuel cell capable of providing electrical power for said optical position tracking system and said transmitter.

Koripella discloses a micro fuel cell (fig. 3) electrically capable of providing electrical power (col. 6, lines 1-4).

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Derocher and *Koripella* are analogous art because they are directed at a similar problem solving area, namely powering handheld electronic devices (*Koripella*, 60 in fig. 3).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the portable device fuel cell taught by *Koripella* on the wireless optical mouse disclosed by *Derocher*.

The motivation for doing so would have been to lengthen the battery life of the device.

Therefore it would have been obvious to combine *Koripella* with *Derocher* for the benefit of longer battery life to obtain the invention as specified in claim 1.

Office Action of September 1, 2005, pp. 2-3 (emphasis in original).

A.1.1 The Proposed Combination Does Not Teach all of the Features of Claim 1

Regarding claim 1, the examiner has failed to state a *prima facie* obviousness rejection because the proposed combination does not teach all of the features of claim 1. A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). In the case at hand, not all of the features of the claimed invention have been considered and the teachings of the references themselves do not suggest the claimed subject matter to a person of ordinary skill in the art.

Claim 1 contains the feature that a micro fuel cell is electrically coupled to the transmitter and to the optical position tracking system. The examiner admits and Applicants agree that *Derocher* does not teach or suggest this feature. In addition, *Koripella* does not teach or suggest this feature. While *Koripella* does show a fuel cell system, *Koripella* does not teach or suggest a fuel cell system electrically coupled to a transmitter and to an optical position tracking system. The examiner fails to assert otherwise. For these reasons, the proposed

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combination of *Koripella* and *Derocher* does not teach all of the features of claim 1 when the references are considered as a whole. Accordingly, the examiner has failed to state a *prima facie* obviousness rejection against claim 1.

A.1.ii The Proposed Combination Changes the Principle of Operation of the Primary Reference

Further regarding claim 1, the examiner has failed to state a *prima facie* obviousness rejection because the proposed combination changes the principle of operation of the primary reference. In combining references to show the claimed feature, the proposed modification cannot change the principle of operation of a reference. See *In re Ratti*, 270 F.2d 810, 123 (CCPA 1959) and MPEP 2143.01. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *Id.*

In the case at hand, the proposed combination changes the principle of operation of the primary reference. The primary reference, *Derocher*, is concerned with a laptop system including a portable battery recharger for a wireless mouse. *Derocher* describes in great detail the principle and workings of the portable battery recharger. Specifically, *Derocher* provides that:

FIG. 5 is a perspective illustration of a portable computing system having a portable computer 10 with an accessory bay 26 in a base 28. A display 14 is attached to the base 28, preferably with a rotating hinge. The display allows a user to view information from the portable computer 10. The user can highlight or select information on the screen using a cursor 20. A wireless mouse 50 using wireless transceiver 52 to a wireless transceiver 16 in the portable computer 10 controls the cursor 20. A rechargeable battery preferably powers the wireless mouse 50. When the mouse battery need to be recharged, the user fits the wireless mouse 50 into a mouse bay 40 in a module 30. The module 30 makes contact with a battery charger within the portable computer 10 using module connector 32. Optionally, the module 30 has a reserve battery 36 and a reserve charger 34 which are used to recharge the battery in the wireless mouse 50 even if the module 30 is not fitted within portable computer 10. The reserve battery 36 is itself recharged when the module 30 is placed in accessory bay 26 of the portable computer 10.

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Derocher, col. 4, ll. 34-52.

As shown above, *Derocher* only teaches that the wireless mouse use a conventional rechargeable battery that is recharged in a conventional manner. *Derocher* does not teach or suggest any other mechanism for providing power to the wireless mouse; indeed, to provide another system for providing power to the wireless mouse would defeat the entire purpose of *Derocher*'s recharging device. Providing power to the wireless mouse via any principle other than that described in *Derocher* would mean modifying, altering or replacing the principle of operation of *Derocher*'s system. In this case, the examiner's proposed combination changes the principle of operation of *Derocher*'s system because a fuel cell would be used with the *Derocher* mouse, but a fuel cell is not rechargeable in the manner taught by *Derocher*. In other words, the examiner's proposed combination changes the principle of how the batteries in *Derocher*'s mouse are recharged. As shown above, *In re Ratti* provides that changing the principle of operation of a device renders a claim non-obvious in view of the proposed combination. Therefore, claim 1 is non-obvious in view of the proposed combination and the examiner has failed to state a *prima facie* obviousness rejection against claim 1.

A.1.iii The Examiner Has Not Stated a Proper Teaching, Suggestion or Motivation to Combine the References

In addition, the examiner has failed to state a *prima facie* obviousness rejection against claim 1 because the examiner has not stated a proper teaching, suggestion, or motivation to combine the references. Instead, the examiner has only stated a proposed advantage to combining the references. However, an advantage is not necessarily a teaching, suggestion, or motivation. To constitute a proper teaching, suggestion, or motivation, the examiner must establish that one of ordinary skill would both recognize the advantage and have a reason to implement the advantage. For example, a first reference may disclose the use of lasers to achieve nuclear fusion. A second reference may disclose that ultra-high power lasers deliver more energy. One of ordinary skill may recognize that an ultra-high power laser would be more useful to achieve nuclear fusion, though one of ordinary skill would be motivated to avoid combining the references because of the extreme expense of ultra-high power lasers. In this example, one of ordinary skill is motivated to avoid implementing the combination, even if he

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or she recognized the advantage, and so no teaching, suggestion, or motivation exists to combine the references.

In the case at hand, the examiner has not provided a sufficient reason why one of ordinary skill would recognize the proposed advantage or have a reason to implement it. The examiner states that "the motivation for doing so would have been to lengthen the battery life of the device." However, the proposed motivation does not actually exist because *Derocher*'s rechargeable battery system vitiates any putative need to extend the battery life of *Derocher*'s mouse. For these reasons, the examiner's statement fails to provide a proper teaching, suggestion, or motivation to combine the references to achieve the invention of claim 1. Accordingly, the examiner has failed to state a *prima facie* obviousness rejection against claim 1.

In addition, the references themselves do not suggest the proposed advantage. In the present case, neither *Derocher* nor *Koripella* teach incorporating a fuel cell into a wireless mouse. Accordingly, the examiner has not actually stated a teaching or suggestion based on the references to combine the references. Similarly, the examiner has not asserted a teaching, suggestion, or motivation that can be found in some other form of prior art. Instead, the examiner has only put forth a hypothetical advantage of combining the references based on the examiner's opinion rather than on a pre-existing teaching, suggestion, or motivation. Thus, the examiner has failed to state a *prima facie* obviousness rejection against claim 1.

A.1.iv No Teaching, Suggestion, or Motivation Exists to Combine the References

In addition, a *prima facie* obviousness rejection against claim 1 has not been made because no proper teaching or suggestion to combine the references exists. A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). A proper *prima facie* case of obviousness cannot be established by combining the teachings of the prior art absent some teaching, incentive, or suggestion supporting the combination. *In re Napier*, 55 F.3d 610, 613, 34 U.S.P.Q.2d 1782, 1784 (Fed. Cir. 1995); *In re Bond*, 910 F.2d 831, 834, 15 U.S.P.Q.2d 1566, 1568 (Fed. Cir. 1990). No such teaching or suggestion is present in the cited references and the examiner has

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not pointed out any teaching or suggestion that is based on the prior art.

In this case, *Derocher* has no need for placing a fuel cell inside the wireless mouse and *Koripella* provides no reason to add a fuel cell to the wireless mouse of *Derocher*. *Derocher* teaches a system for recharging the batteries of a wireless mouse. The entire purpose of *Derocher*'s system is to recharge the batteries of the wireless mouse. *Derocher* has no need for adding a fuel cell to the wireless mouse of *Derocher* because *Derocher* does not need to extend the battery life of the wireless mouse. Accordingly, *Derocher* does not show a shortcoming or a need for a fuel cell that would suggest or motivate one of ordinary skill to look to *Koripella*. Because no need for the proposed combination exists, and because no pre-existing teaching, suggestion, or motivation to combine the references has been pointed out, no teaching, suggestion, or motivation exists to combine the references. Accordingly, the examiner has failed to state a *prima facie* obviousness rejection against claim 1.

A.1.v No Teaching or Suggestion Exists To Combine the References Because Each Reference Represents a Complete Solution to the Problem That Each Solves

Both *Derocher* and *Koripella* represent complete solutions to the problems each solves. *Derocher* shows a device for recharging batteries in a wireless mouse. *Derocher* has no need to address the problem recharging mouse batteries or extending the lifetime of mouse batteries because *Derocher* provides a mechanism to recharge the batteries quickly and easily. On the other hand, *Koripella* shows a miniaturized fuel cell and *Koripella* represents a complete solution for fashioning such a device. Because each reference provides a complete solution to the problem that each reference represents and neither reference indicates that a fuel cell should be included in a wireless mouse as claimed, one of ordinary skill would have no reason to combine or otherwise modify the references. Accordingly, the examiner has failed to state a *prima facie* obviousness rejection against claim 1.

A.1.vi The Examiner Used Impermissible Hindsight When Fashioning the Rejection

In addition, the examiner has failed to state a *prima facie* obviousness rejection against claim 1 because the examiner used impermissible hindsight when fashioning the rejection. Personal opinion cannot be substituted for what the prior art teaches because a *prima facie* case

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of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). In this case, the examiner believes that, "the motivation for doing so would have been to lengthen the battery life of the device." However, *Derocher* has no need to extend the battery life of a wireless mouse, as evidenced by the fact that the *Derocher*'s entire invention is directed to keeping the batteries in the wireless mouse recharged, or to easily recharging the batteries in the wireless mouse. *Koripella* fails to provide a reason to include a fuel cell in a wireless device in the manner claimed. Given that *Derocher* has no need for a fuel cell, and given that *Koripella* suggests no reason to place a fuel cell in a wireless mouse, one of ordinary skill would have no reason to combine or otherwise modify the references.

Based on the plain disclosures in the references, the only suggestion to modify the references is found in Applicants' specification. Hence, the examiner must have used Applicants' specification to find a teaching, suggestion, or motivation to combine the references. Doing so is impermissible hindsight and fails to comport with the standards of *Graham v. John Deere Co.*, 383 U.S. 1 (1966), which requires a proper teaching, suggestion, or motivation to combine or modify references to achieve a proper obviousness rejection. Accordingly, the examiner has failed to state a *prima facie* obviousness rejection against claim 1.

A.1.vii *Derocher* and *Koripella* Would Not Be Combined By One of Ordinary Skill in the Art Because They Address Different Problems

One of ordinary skill would not combine the references to achieve the invention of claim 1 because the references are directed towards solving different problems. "It is necessary to consider the reality of the circumstances—in other words, common sense—in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor." *In re Oetiker*, 977 F.2d 1443 (Fed. Cir. 1992); *In re Wood*, 599 F.2d 1032, 1036, 202 U.S.P.Q. 171, 174 (CCPA 1979). The cited references do not address the same problems.

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In the case at hand, *Derocher* is directed to solving the problem of recharging batteries in a wireless mouse. For example, *Derocher* provides that:

The invention relates to a wireless mouse for a portable computer, more specifically, it relates to charging a battery within the mouse by using a module for an accessory port of the portable computer.

...

The invention provides a simple, compact, and convenient method of providing a mouse type device for a portable computer. By preferably combining an optical sensing mouse in a retractable package with a wireless link, desktop mouse functionality is achieved. However, to power the optical sensing circuits and wireless link, the mouse has a battery power source. To prevent the user from having to carry a supply of replacement batteries, the mouse battery is preferably rechargeable. One aspect of the invention is to provide an accessory module for an accessory bay in the portable computer. The accessory module has positioning walls that allow the mouse to be docked and connected to a recharging circuit. Another aspect of the invention is to allow the mouse to be recharged whether or not the accessory module is inserted into the accessory bay of the portable computer. Further aspects will become apparent in the detailed description of embodiments of the invention.

Derocher, col. 1, ll. 5-8 and col. 2, ll. 44-60.

On the other hand, *Koripella* is directed to the problem of miniaturizing fuel cells. For example, *Koripella* provides as follows:

During operation of a direct methanol fuel cell, a dilute aqueous methanol (usually 3-46 methanol) solution is used as the fuel on the anode side. If the methanol concentration is too high, then there is a methanol crossover problem that will reduce the efficiency of the fuel cell. If the methanol concentration is too low then there will not be enough fuel on the anode side for the fuel cell reaction. Current DMFC designs are for larger stacks with forced airflow. The smaller air breathing DMFC designs are difficult to accomplish because of the complexity in miniaturizing the system for portable applications. For portable applications carrying the fuel in the form of a very dilute methanol mixture would require carrying a large quantity of fuel which is not practical for the design of a miniature power source for portable applications. Miniaturizing the DMFC system requires carrying methanol and water separately and mixing them in-situ for the fuel cell reaction. Recirculation of the water fuel mixture after the fuel cell reaction and recycling of the water generated in the fuel cell reaction, in addition to the water diffused across the membrane is also required

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for miniaturizing the system.

Accordingly, it is a purpose of the present invention to provide for a direct methanol fuel cell system design in which at least one direct methanol fuel cell is integrated into a miniaturized system.

Koripella, col. 1, l. 51 through col. 2, l. 9.

Thus, the references address completely distinct problems that are utterly unrelated to each other. Because the references address completely distinct problems, one of ordinary skill would have no reason to combine or otherwise modify the references to achieve the claimed invention. Thus, one of ordinary skill in the art would not combine these references as proposed by the examiner. Accordingly, the examiner has failed to state a *prima facie* obviousness rejection against claim 1.

Nevertheless, the examiner believes that:

Derocher and *Koripella* are analogous art because they are directed at a similar problem solving area, namely powering handheld electronic devices (*Koripella*, 60 in fig. 3).

Office Action of September 1, 2005, p. 2.

The examiner's statement does not adequately address the fact that *Derocher* and *Koripella* address different problems. The examiner's statement refers to an overly-broad perspective of the references when considered as a whole. The examiner essentially states that because the two references address powering hand-held electronic devices, that the references are analogous. However, this statement is too broad to rebut the fact that the references address entirely different problems. Therefore, combining the references to achieve the claimed invention would not be obvious.

For example, as shown above and below, when the technical details of the references are considered, the logical conclusion to draw is that one of ordinary skill would not combine the references because combining the references would defeat the purpose of *Derocher*'s system. The reason for this fact is, in part, derived from the fact that the references address different problems. The examiner has not overcome the specific deficiencies in *Derocher* and *Koripella* and has not overcome any of the specific facts pointed out by Applicants that show that one of ordinary skill would not combine the references when the references are considered

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as a whole. For this reason, and for the reasons already given, the examiner has failed to state a *prima facie* obviousness rejection against claim 1.

A.1.viii. The Age of the References Proves that No Teaching, Suggestion, or Motivation Exists to Combine the References to Achieve the Invention of Claim 1

The age of the references proves that no teaching, suggestion, or motivation exists to combine the references to achieve the invention of claim 1. The age of the references also prove that the examiner's fundamental assumption that it would be obvious to use a fuel cell to power a wireless position and tracking system is inherently flawed.

Micro fuel cells have been known for many decades. See, for example, *Anderten et al.*, Method and Apparatus for Ventilating an Occupied Space, U.S. Patent 4,164,172 (August 14, 1979), which describes using a micro fuel cell to power an oxygen sensor. Similarly, wireless portable tracking devices have been known for decades. See, for example, *Baker et al.*, Method and Apparatus for Wireless Cursor Position Control, U.S. Patent 4,578,674 (March 25, 1986). Had the proposed combination been obvious, given the value of the claimed invention, then someone of ordinary skill would have already combined a micro fuel cell and a wireless position and tracking system as suggested by the examiner. However, in the intervening decades since 1986, no one – *other than applicants and the examiner* – have recognized the claimed invention. Because thousands of engineers have failed in the past twenty years to create and market or disclose the claimed invention, the claimed invention *must* be non-obvious. Applicants describe *why* the claimed invention is non-obvious below.

A fuel cell converts hydrogen and oxygen into water, and in the process the fuel cell produces electricity. Thus, a byproduct of the operation of a fuel cell is *water*. One of ordinary skill would be motivated to avoid placing a fuel cell into a wireless position tracking device because the exhaust water and water vapor would damage sensitive electronics within the device.

The problem of exhaust water is more telling for the device shown by *Derocher*. *Derocher* shows that the wireless position tracking device (the mouse) is stored within the computer housing. See, for example, figure 1 of *Derocher*, reproduced below:

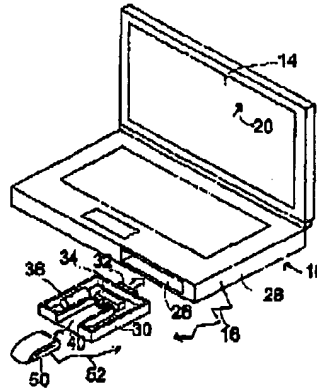
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Because the wireless tracking device 50 is placed within housing 10, any fuel cell placed within wireless tracking device 50 would vent exhaust water into the *housing of the computer*. Even when device 50 was not in use, the fuel cell would vent some exhaust water into the housing of the computer. As a result, sensitive electronics within the computer would be damaged, metal connections would be compromised, and the entire computer 10 would be rendered useless. One of ordinary skill would be motivated to avoid this result. Therefore, no teaching, suggestion, or motivation exists to place a fuel cell within *Derocher's* device. Accordingly, the examiner has failed to state a *prima facie* obviousness rejection against the claims.

The fact that one of ordinary skill would be motivated to avoid the invention of claim 1 shows that the examiner has not considered the entirety of the problem of providing power to a wireless optical navigation device, as claimed. The examiner has narrowly focused on whether a fuel cell could provide power to the wireless mouse of *Derocher*. However, the examiner has not considered the wisdom of doing so, the practicality of doing so, or how one of ordinary skill would implement the proposed combination.

For example, under the examiner's reasoning, it would be "obvious" to use a fusion reactor to provide power to the wireless mouse of *Derocher* because power from a fusion reactor *could* power the mouse. However, clearly no-one of ordinary skill would consider such a device "obvious" because a fusion reactor could not be housed within a mouse and because such a device would be astronomically too expensive. This example shows that the examiner's logic is flawed and also insufficient to establish the obviousness of the invention of claim 1.

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Instead, as shown above, one of ordinary skill would have no reason to combine the references and would, instead, be motivated to *avoid* combining the references. Accordingly, no teaching, suggestion, or motivation exists to combine the references and the examiner has failed to state a *prima facie* obviousness rejection against claim 1 or any of the other claims.

A.1.ix Summary of Why the Examiner Has Failed to State a *Prima facie* Obviousness Rejection Against Claim 1.

In general, the examiner appears to proceed from the false assumption that just because individual elements of a claimed invention can be found in two or more references, that combining the references would automatically render the claimed invention obvious to one of ordinary skill. In fact, that vast bulk of patentable inventions are derived from combinations of elements that can be found the prior art.

In the case at hand, the examiner has failed to state a *prima facie* obviousness rejection for the following reasons: The proposed combination does not teach all of the features of claim 1; combining the references would change the principle of operation of *Derocher*'s device; the examiner has not stated a proper teaching, suggestion or motivation to combine the references; no teaching, suggestion, or motivation exists to combine the references; the examiner used impermissible hindsight when fashioning the rejection; and *Derocher* and *Koripella* would not be combined by one of ordinary skill in the art because they address different problems. Additionally, the age of the references proves that no teaching, suggestion, or motivation exists to combine the references in the manner suggested by the examiner. Therefore, Applicants request that the rejections against claim 1 be withdrawn and that claim 1 be allowed.

A.1.x. Remaining Claims

The remaining claims in this grouping of claims all contain features similar to those presented in claim 1 or the remaining claims depend from claim 1. Therefore, the examiner has failed to state a *prima facie* obviousness rejection against these claims at least by virtue of the reasons presented above vis-à-vis the response to the rejection of claim 1. Accordingly, the examiner has failed to state a *prima facie* obviousness rejection against claims 1-9 and 12-20 in view of *Derocher* and *Koripella*.

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A.2. Specific Rebuttals to the Examiners Assertions Made in the Office Action of January 12, 2006.

Applicants now address and rebut the examiner's assertions made in the office action of January 12, 2006. The examiner makes additional arguments in the final office action of May 31, 2006. Applicants rebut the arguments made in the final office action of May 31, 2006 in the following section, A.3.

A.2.1 The Proposed Combination Does Not Teach All of the Features of Claim 1

Turning first to the examiner's arguments made in the office action of January 12, 2006, the examiner states that:

In section I.A applicant argues that all of the features of claim 1, are not taught by the proposed combination. *Koripella* teaches coupling a micro fuel cell to a rechargeable battery and to a portable electronic device. *Derocher* provides power for an optical position tracking system and a transmitter via a rechargeable battery, solely. Supplementing *Derocher*'s rechargeable battery power with a micro fuel cell, as taught by *Koripella*, would clearly cause the micro fuel cell to provide power to the optical position and tracking system and transmitter of *Derocher*.

Office action of January 12, 2006, p.2 (emphasis added).

The examiner specifically asserts in the rejection that, "*Derocher* does not expressly disclose a micro fuel cell *electrically coupled to said transmitter and said optical position tracking system*," The rejection appears to be predicated on not only the substitution of a battery for a micro fuel cell in *Derocher*, but also that the fuel cell is electrically coupled as claimed. The examiner has failed to assert how *Koripella* shows an electrical connection between a micro fuel cell and an optical position tracking system, as recited in claim 1. Hence, the examiner has failed to state a *prima facie* obviousness rejection against claim 1.

Additionally, as shown above, the fact that *Derocher*'s device could be powered with a fuel cell is not, itself, logically sufficient to establish the obviousness of the claimed invention. The flaws in the examiner's logic are apparent in the light that the proposed combination would result in an unworkable device and because a fuel cell would damage *Derocher*'s device. Furthermore, had the claimed invention been obvious, then one of ordinary skill would have

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created, sold, or disclosed the claimed invention in the intervening decades since fuel cell technology and wireless optical navigation technology were first created. Accordingly, the examiner continues to fail to state a *prima facie* obviousness rejection of claim 1.

A.2.ii The Proposed Combination Changes the Principle of Operation of the Primary Reference

Regarding the fact that the proposed combination changes the principle of operation of the primary references, the examiner states that:

In section I.B applicant argues that by combining *Derocher* and *Koripella* would change the principle of operation of *Derocher*. On the contrary, *Koripella* teaches the inclusion of a rechargeable battery. *Koripella* simply supplements the rechargeable battery with power from a micro fuel cell. *Koripella*'s rechargeable battery is still capable of being recharged. Therefore, *Derocher*'s rechargeable mouse would still be able to operate as prescribed, just as *Koripella*'s portable electronic device, cell phone for example, is still functional with the addition of a micro fuel cell.

Office Action of January 12, 2006, p. 2.

Again, the examiner's fundamental assumption that one source of power can be "simply" substituted for another is fundamentally flawed, as explained above. Additionally, providing power to the wireless mouse via any principle other than that described in *Derocher* would mean modifying, altering or replacing the *principle of operation* of *Derocher*'s system. The fact that *Koripella*'s rechargeable battery is "still capable of being recharged" is irrelevant.

Additionally, the examiner's assertion is erroneous. Fuel cells are not recharged. Instead, additional fuel is provided for fuel cells. See, for example, fuelcellmarkets.com/article_flat.fcfm?articleid=696&subsite=1. In stark contrast, the battery provided by *Derocher*'s system *is* rechargeable. If the examiner's proposed substitution of a fuel cell with a battery were made, then the examiner would replace a rechargeable battery with a non-rechargeable battery. In such a system, the entire purpose of *Derocher*'s device would be rendered pointless. Thus, not only does the proposed combination change the principle of operation of the primary reference, but no motivation exists to combine the references to achieve the invention of claim 1.

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The undeniable, physically provable fact is that the proposed combination would change principle of operation of *Derocher's* system from a rechargeable battery to a fuel cell. The two technologies are completely distinct and rely on different principles of operation. For example, a battery is rechargeable and a fuel cell is not rechargeable. Therefore, proposed combination *would change* the principle of operation of *Derocher's* device. For this reason, the examiner has failed to state a *prima facie* obviousness rejection, as explained in the previous response to office action.

A.2.III. No Teaching, Suggestion, or Motivation Exists to Combine the References

In response to the fact that no teaching, suggestion, or motivation exists to combine the references, the examiner states that:

In section I.C-E applicant argues there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, extending the battery life of the rechargeable battery, and thus decreasing the frequency that the mouse must be

recharged is knowledge generally available to one of ordinary skill in the art.

Office Action of January 12, 2006, pp. 2-3.

The examiner's statement, on its face, provides no teaching, suggestion, or motivation to combine the references. The examiner asserts that extending the life of a battery for a wireless mouse is advantageous and is known to one of ordinary skill. The examiner thereby implies that the motivation to combine the references is to extend the life of the battery. However, the examiner provides no teaching, suggestion, or motivation from the art itself or from knowledge generally available to one of ordinary skill in the art to actually provide a fuel cell for a wireless optical navigation device, as claimed in claim 1. Instead, the examiner continues to rely on the false premise that one of ordinary skill could technically implement the proposed combination in the first place. The examiner also ignores the well-known fact that

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fuel cells and wireless position tracking systems have been well-known for decades. Instead, the examiner relies on a statement that, as explained above, is logically insufficient to establish the obviousness of claim 1 in view of the references considered as a whole.

A.2.iv The Examiner Used Impermissible Hindsight When Fashioning the Rejections

In response to the fact that the examiner used impermissible hindsight when fashioning the rejections, the examiner states that:

In section I.F applicant argues that the examiner's conclusion of obviousness is based on improper hindsight reasoning. It must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1932, 170 USPQ 209 (CCPA 1971).

Office Action of January 12, 2006, p.3.

The examiner has not rebutted any of the arguments presented in the previous response to office action in this regard. The examiner has merely stated a purported principle of the law governing obviousness. However, the examiner has not stated how that purported principle shows that the examiner did not use improper hindsight when fashioning the obviousness rejection. Accordingly, the examiner continues to fail to assert a *prima facie* obviousness rejection in this regard.

Additionally, as shown above, both fuel cells and wireless position tracking devices have been known for decades. However, of everyone on the face of the planet only Applicants invented the device of claim 1 and only *the examiner* has proposed that one of ordinary skill would find that device obvious in view of the cited references. In the face of the failure of thousands, perhaps millions, of individuals to make, sell, or publicly describe the claimed device in over two decades, the logical conclusion to draw is that the examiner *must* have used Applicants' own disclosure as a motivation to combine the references.

The conclusion that the examiner used impermissible hindsight is further strengthened by the fact that fuel cells and batteries are wholly distinct. For example, fuel cells are not

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recharged in the same manner as batteries are recharged. Thus, the proposed combination would render the entire point of *Derocher*'s device – a system for recharging the batteries of a wireless mouse – pointless. For this reason, no motivation exists for one of ordinary skill in the art to combine the references to achieve the invention of claim 1.

The conclusion that the examiner used impermissible hindsight is further strengthened by the technical hurdles associated with placing a fuel cell within a wireless position tracking device. The examiner has ignored the problem of exhaust water in wireless optical navigation devices for use with computers. Thus, the examiner must have referred to the benefits of using a fuel cell without considering the reasons why one of ordinary skill would not implement the proposed combination. Accordingly, the examiner did not fully consider what one of ordinary skill in the art knows and instead used Applicant's disclosure as a template for fashioning the rejection.

A.2.v. *Koripella* is Non-Analogous Art

In addition, the examiner failed to state a *prima facie* obviousness rejection against claim 1 because *Koripella* is non-analogous art vis-à-vis claim 1. The examiner asserts otherwise, stating that:

In response to applicant's argument that *Derocher* and *Koripella* are nonanalogous art (sec. I.G), it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

In this case, both *Derocher* and *Koripella* are directed to the applicant's current problem of effectively and efficiently supplying rechargeable power to wireless portable devices. While *Koripella* solves this problem by jointly a micro fuel cell and a rechargeable battery and *Derocher* focuses solely on a rechargeable battery, the end goal is identical, to provide a rechargeable and long lasting power supply to a wireless portable device.

Office Action of January 12, 2006, pp.3-4.

The examiner states that the end goal of both *Koripella* and *Derocher* is to provide a

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rechargeable and long lasting power supply to a wireless portable device. Thus, the examiner appears to state that *Derocher* and *Koripella* are both "reasonably pertinent" to the particular problem with which the applicant was concerned and, implicitly, that *Koripella* is in a different field of Applicant's endeavor.

The examiner's characterization of the problem addressed by the claimed invention is overly broad and fails the test for analogous art set forth by the court in *In re Oetiker*. The invention of claim 1 is directed to "a wireless optical navigation device," not simply a "wireless portable device." Whereas it *might* be fair to characterize *Derocher* as being directed to a wireless optical navigation device, nothing in *Koripella* teaches or suggests that fuel cells are suitable for use in a *wireless optical navigation device*.

The court in *In re Oetiker* stated that:

It has not been shown that a person of ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected or motivated to look to fasteners for garments.

In re Oetiker, 977 F.2d 1443, 1447 (Fed. Cir. 1992).

The court found that a person of ordinary skill would not reasonably be expected or motivated to look to fasteners for garments for solutions to a problem regarding fastening a hose clamp. Both the reference (fasteners for garments) and the invention in that case (device for fastening a hose clamp) involved extremely similar devices; namely, both the reference and the invention in that case were related to the general problem of fastening small objects together. However, the court nevertheless deemed the reference in *In re Oetiker* to be non-analogous art.

In the case at hand, the invention of claim 1 is directed to a wireless optical navigation device. For purposes of argument, Applicants assume here that *Koripella* solves a problem of providing power to a cell phone. However, a cell phone is different than a wireless optical navigation device, much like fasteners for garments are different than devices for fastening a hose clamp. The fact that both a cell phone and a wireless optical navigation device possibly could be characterized as portable electronic devices is irrelevant under the standards of *In re Oetiker* because the devices themselves must be considered, not some broad category into which both devices can be included.

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Thus, *Koripella* is not reasonably related to the problem to be solved, even if the examiner's characterization of the problem claim 1 solves is correct. Additionally, the examiner appears to implicitly admit that *Koripella* is in a different field of endeavor from the claimed invention. Accordingly, *Koripella* fails both tests of *In re Oetiker*. For this reason, *Koripella* is non-analogous art.

A.2.vi. Summary of Rebuttal Arguments to the Examiner's Assertions in the Office Action of January 12, 2006

As shown above, one of ordinary skill would not be motivated to combine the references to achieve the invention of claim 1. The proposed combination changes the principle of operation of the primary reference, *Derocher*, because fuel cells are not rechargeable, whereas batteries are rechargeable. For this reason alone, the proposed combination changes the principle of operation of *Derocher* because the entire point of *Derocher*'s system is to provide a mechanism for recharging batteries in a wireless mouse. Moreover, because the proposed combination would render *Derocher*'s system pointless, no teaching, suggestion, or motivation exists to combine the references to achieve the invention of claim 1.

Additionally, one of ordinary skill would be motivated to avoid combining the references because of the problems associated with water exhaust in fuel cells. Additionally, fuel cells and wireless optical navigation devices have been known for decades. Had claim 1 been obvious then one of ordinary skill would have already created, sold, or publicly described the invention of claim 1. Additionally, the examiner has logically failed to rebut any of the arguments presented in the prior response to office action. Accordingly, claim 1 is not obvious and the examiner has failed to state a *prima facie* obviousness rejection of claim 1. The remaining claims contain features similar to those presented in claim 1 and the remaining rejections all rely on *Derocher* to some extent. Thus, the examiner has failed to state *prima facie* obviousness rejections against any of the claims.

A.3. Specific Rebuttals to the Examiner's Assertions Made in the Final Office Action of May 31, 2006.

Applicants now address and rebut the examiner's assertions made in the office action of

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May 31, 2006. For ease of reference, Applicants use the same headings used by the examiner. However, Applicants do not necessarily agree with any implied characterization of the facts presented by Applicants through the use of the examiner's headings.

A.3.i. "Uncombinable Argument"

The examiner asserts that the proposed combination is combinable. Specifically, the examiner asserts that:

2. On pages 6 and 7 of the remarks, applicant argues that because a DMFC creates water as a byproduct of use, and the mouse of *Derocher* is at times stored within a laptop computer, this would in time render the computer useless. Therefore one of ordinary skill in the art would not be motivated to combine the two.

The examiner respectfully disagrees. Clearly *Koripella* has found a way to effectively power a sensitive electronic device by means of a DMFC without rendering the device useless. This is evidenced by his disclosure of such a fuel cell in a cell phone and other portable electronic devices (col. 6, lines 1-4). Therefore how to vent the exhaust water in such a way as to protect the sensitive electronics of the device, is obvious to those of ordinary skill.

Final office action of May 31, 2006, p. 2.

The examiner's response ignores the fact that *Derocher*'s system requires placing the wireless mouse *inside the housing* of the portable computer in order to recharge the mouse. Even if *Koripella* found a way to safely vent exhaust water from the fuel cell powered device itself, the proposed combination would still result in a device in which exhaust water would be expelled inside the housing of the portable computer. One of ordinary skill would recognize the high probability of resulting damage to the portable computer and therefore would avoid combining the references to achieve the invention of claim 1.

Furthermore, the fact that *Koripella* provides an example of providing power for a cell phone with a fuel cell does not logically mean that exhaust water is not a problem in these types of devices. While some kind of venting system is needed for the exhaust water, exhaust water remains a problem in electronic devices powered by fuel cells. The examiner does not consider or appreciate this fact, which would motivate one of ordinary skill to avoid combining the references.

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Additionally, even exhaust water could be vented from the housing of *Derocher's* portable computer, additional features would have to be added to the proposed combination in order to render the proposed combination operable. The examiner has not added these necessary features to the combination of the references and has provided no technical basis for the assumption that a venting system could be used in *Derocher's* system. Thus, again, the examiner has failed to provide any reason that one of ordinary skill could or would combine the references. Accordingly, the examiner has failed to state a *prima facie* obviousness rejection against claim 1.

A.3.ii "Changes Principle of Operation Argument"

The examiner asserts that the proposed combination does not change the principle of operation of the primary reference. Specifically, the examiner states that:

The Examiner respectfully disagrees. As shown in *Kortipella* the fuel cell is used to supplement the power of the rechargeable battery. Combining *Kortipella's* fuel cell with the existing rechargeable battery system of *Derocher* would not change the principle idea of *Derocher*. *Derocher's* system would still be able to recharge the mouse rechargeable battery, and solve the problem stated by *Derocher* of requiring the user to carry several replacement batteries. In addition, with the fuel cell *supplementing* the rechargeable power of *Derocher* (similar to the situation disclosed by *Kortipella*), the mouse would be able to operate for longer periods between charges.

Final office action of May 31, 2006, p.3 (emphasis in original).

Even if the examiner's assertions are all correct, the proposed combination still changes the principle of the primary reference, *Derocher*. First, the proposed combination does not provide for a system for supplementing a battery powered device; but rather, the proposed combination substitutes a fuel cell for a battery. As stated above, a fuel cell is entirely distinct from a battery; both systems operate on entirely different physical principles. Batteries are rechargeable, fuel cells are not rechargeable. Thus, the proposed combination, *as stated*, changes the principle of operation the primary reference.

Second, even if the proposed combination provided for a system for supplementing a battery powered device, the proposed combination still changes the principle of operation of the primary reference. By definition, adding a fuel cell to supplement a battery changes the

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principle of operation of how the battery is recharged. Thus, the proposed combination changes the principle of operation of the primary reference. Accordingly, the examiner has failed to state a *prima facie* obviousness rejection against claim 1.

A.3.III "Hindsight Argument"

The examiner asserts that the examiner did not use impermissible hindsight when combining the references. Specifically, the examiner states that:

Applicant again argues that the Examiner used impermissible hindsight in combining *Koripella* and *Derocher*. Specifically stating that the Examiner has not shown how he did not use improper hindsight. Examiner once again states that so long as the combination takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Derocher teaches a wireless, optical, rechargeable mouse. *Koripella* teaches a fuel cell that supplements a rechargeable battery for powering a portable electronic device. *Derocher*'s battery requires frequent recharging. Thus there is obviously a need for a rechargeable mouse that operates longer in-between charges. A solution, clear to those of ordinary skill in the art, is the inclusion of a fuel cell as taught by *Koripella*. With each of these simple facts available at the time of the invention, the Examiner fails to see how this could be perceived as improper hindsight.

Final office action of May 31, 2006, pp. 3-4 (emphasis in original).

The examiner's assertions rely on two fundamental and flawed assumptions, which the examiner erroneously asserts are "obvious" and "clear." First, the examiner assumes that, in view of *Derocher*'s disclosures, a need exists for a rechargeable mouse that operates longer between charges. Second, the examiner assumes that a "clear" solution is the inclusion of a fuel cell in *Derocher*'s system as asserted to be taught by *Koripella*. Applicants address each of these flawed assertions in turn.

The examiner's assertion that a need exists for a rechargeable battery for a wireless mouse, where the rechargeable battery needs fewer recharging sessions, is without foundation in the context of *Derocher*'s disclosure. Given that even a conventional battery-operated mouse

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can operate for *months* in normal use without replacing a typical type-AA battery, no reason exists to assume that extending the battery life of the wireless mouse during use is necessary or even desirable. A user will not use a wireless mouse for hundreds of hours before re-inserting the wireless mouse back into *Derocher's* rechargeable housing.

Derocher provides for a means for recharging the batteries in a wireless mouse between uses. Given that no reason exists to recharge the batteries of the mouse during use, the examiner's assertion a need exists for a rechargeable mouse that operates between charges is without foundation. Thus, the examiner's supposedly "clear" need does not actually exist.

Applicants now address the examiner's second flawed assumption. The examiner assumes that a "clear" solution is the inclusion of a fuel cell in *Derocher's* system as asserted to be taught by *Koripella*. Assuming, *arguendo*, that the purported need exists, the solution of the inclusion of a fuel cell is not "clear." As shown above, the examiner continues to fail to address the issue of venting exhaust water from the fuel cell *into the housing* of the laptop. The assumed existence of a solution for venting exhaust water from a cell phone into open air does not teach or suggest any solution for venting additional exhaust water from the housing of the laptop, as would be required in *Derocher's* system. Given the additional technical hurdles to solve in this regard and given the additional expense of providing such a system, no reasons exists to believe that a solution to the purported need is at all "clear." In fact, the opposite is true, one of ordinary skill would not see a clear solution or, even if the solution would immediately present itself, strong reasons exist to avoid implementing the additional modifications required to *Derocher's* system.

Thus, the examiner's flawed assumptions lead the examiner to make fashion the rejections in the proposed manner. The flawed assumptions could only be made by referencing Applicant's own disclosure.

Additionally, as shown above, the technologies shown in *Derocher* and *Koripella* have existed for *decades*, since before the fall of the former Soviet Union. Given the failure of those of ordinary skill in the art to combine these technologies into a device similar to the claimed invention, the examiner must have used Applicant's disclosure as a template.

Because the examiner used Applicant's disclosure as a template to fashion the rejection, the examiner used impermissible hindsight when fashioning the rejection. Accordingly, the

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examiner failed to state a *prima facie* obviousness rejection against claim 1.

A.3.iv "Non-Analogous Art Argument"

The examiner asserts that *Koripella* is analogous art to claim 1. Specifically, the examiner states that:

As stated in the prior Office Action, *Koripella* and *Derocher* are both directed to a similar problem solving area, providing a rechargeable and long lasting power supply to a handheld wireless portable device. The applicant's claim that *Koripella*'s power supply means for handheld wireless portable devices is not analogous to applicant's wireless optical navigation device is neither conceded by the Examiner or seen as pertinent to the current question, of whether *Koripella* and *Derocher* are reasonably pertinent to the problem of the current invention. The applicant's problem is, the short battery life of batteries used in wireless optical navigation devices (page 1; lines 7-16). It is this problem which is analogous to *Derocher* (overcoming the user having to carry batteries to replace failing batteries of a wireless optical navigation device, col. 2, 50-54) and *Koripella* (overcoming constant recharges of batteries by miniaturizing a fuel cell to supplement the power supplied by a rechargeable battery to a portable wireless electronic device). It seems clear to the Examiner that *Koripella* and *Derocher* are reasonably pertinent to the Applicant's problem of extending battery life in wireless optical navigation devices.

Final office action of May 31, 2006, p. 4.

The examiner impliedly admits that *Koripella* fails the first test of *In re Oetiker* – whether the reference is in the same field of endeavor as the invention of claim 1. In response to the fact that *Koripella* does not reasonably relate to the problem to be solved, the examiner responds by asserting that *Koripella* is directed to overcoming constant recharges of batteries by miniaturizing a fuel cell in a "portable wireless electronic device."

However, the examiner has missed the point of *In re Oetiker*. As explained above, that case requires that the actual technologies used be very similar in order to satisfy the second test regarding relation to the problem to be solved. In *In re Oetiker* the court specifically decided that:

It has not been shown that a person of ordinary skill, seeking to solve a problem of fastening a *hose clamp*, would reasonably be expected or

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motivated to look to *fasteners for garments*.

In re Oetiker, 977 F.2d 1443, 1447 (Fed. Cir. 1992).

Both fasteners for hose clamps and fasteners for garments are fasteners that can, by definition, be used to fasten those respective components. Both sets of fasteners have the specific purpose of "fastening small objects." Moreover, because the two part test in *In re Oetiker* is an "or" test, such that if either test is satisfied then the art is analogous, and because the court decided that the garment reference was non-analogous art, then by implication the court decided that fasteners for hose clamps and fasteners for garments *were not reasonably related to the problem to be solved*. The problem of fastening garments is not reasonably related to the problem of fastening hose clamps, *even though both types of fasteners can be used to fasten objects and even though the fastener for garments was used to provide a fastener in Oetiker's claim*. Thus, the examiner has failed to appreciate, under the standards of *In re Oetiker*, that in order to be reasonably related to the problem to be solved the reference must address *nearly the same* problem. In other words, the examiner is not permitted to broaden the problem to be solved in order to shoehorn a reference into analogous art.

In this case, the examiner does attempt to shoehorn *Koripella* into the category of analogous art by attempting to assert that *Koripella* provides power to a wireless electronic device. The examiner can not broaden the problem in this way under the standards of *In re Oetiker*. Instead, the problem to be solved is providing longer-lasting battery power to a wireless optical navigation device. Although the two problems appear to be somewhat similar, that standard is not good enough under the test provided by *In re Oetiker*. Given that the same type of fastener could not be used as a substitute in *In re Oetiker*, the examiner can not broaden the problem to be solved.

Thus, in further view of the reasons presented above, *Koripella* is non-analogous art that can not be used as a reference to fashion a rejection against claim 1. Accordingly, the examiner has failed to state a *prima facie* obviousness rejection against claim 1.

A.3.v "Length of Time Argument"

Applicants proved that because the underlying technologies shown in *Koripella* and

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Derocher have existed for decades, no motivation exists to combine the references. The examiner responds by stating that:

Throughout the remarks, applicant argues that because both a micro fuel cell and a wireless optical navigation system were each known long ago, and since there is no single embodiment showing the combination of the two, the combination is not obvious. This line of logic if followed to its conclusion would not allow for any obviousness-type rejections at all to be made. Applicant is pointed to 35 U.S.C. 103 that provides the statutory basis for obviousness-type rejections. As it has been shown, in previous office actions, and clarified, above, that the prior art of *Derocher* and *Kortipella* are analogous art, combinable, and contain a motivation to combine; it would clearly have been obvious to one of ordinary skill in the art to combine the two.

Final office action of May 31, 2006, p. 5.

The examiner's asserts that if Applicants line of reasoning were followed to its logical conclusion, then no obviousness-type rejections would exist. The examiner asserts that the existence of 35 U.S.C. § 103 shows that obviousness-type rejections do exist; hence, the examiner impliedly asserts that the age of the references is irrelevant to the determination of obviousness. However, the examiner's assertion is groundless and does not address the fundamental fact that no motivation exists to combine the reference.

The examiner's assertion is groundless because many proper obviousness rejections are formed using references that are recent on a time scale relevant to the pertinent art. Additional proper obviousness rejections are formed based on an old reference and on at least one more recent reference. Thus, no grounds exist to assert then no proper obviousness-type rejection could ever be formed on the narrower basis when *both* references are old.

Additionally, the examiner's assertion does not address the fundamental truth regarding the lack of a motivation to combine the references. Applicants do not argue that claim 1 is non-obvious simply because the references are old. Instead, the fact that *Koripella* and *Derocher* are truly old proves that *no motivation* exists to combine the references. One of ordinary skill has had *Koripella* and *Derocher* at their disposal for over *twenty* years, yet no one has

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combined the references to achieve the invention of claim 1. If combining the references was as "simple" and "obvious" as the examiner asserts, then one of ordinary skill would have already done so.

Although no "bright line" rule exists on the meaning of the term "old" in any given art, common sense dictates what would be considered to be "old." In the case at hand, *both technologies* have been known for *decades*. By any reasonable standard, an entire generation of engineers, scientists, and entrepreneurs is a long time. Given the failure of an entire generation to combine the references, the only logical conclusion to draw is that no motivation exists to combine the references. Thus, the examiner's proposed motivation to combine the references must be fundamentally flawed. The reasons why the examiner's proposed motivation is flawed are presented above.

Additionally, the fact that *Koripella* and *Derocher* are truly old proves that the examiner used impermissible hindsight when fashioning the rejection of claim 1. In the face of the failure of a generation of engineers, scientists, and entrepreneurs in the art of the invention of claim 1, only the examiner asserts that claim 1 is obvious in view of the proposed combination. Given the failure of thousands, perhaps millions, of ordinary artisans, the examiner must have used impermissible hindsight to fashion the rejections.

B. GROUND OF REJECTION 2 (Claim 10)

For the reasons presented below, the examiner failed to assert a *prima facie* obviousness rejection of claim 10 under 35 U.S.C. § 103(a) over *Derocher*, *Koripella*, and *Hirsch*. This rejection is predicated upon the faulty combination of *Derocher* and *Koripella*. Given that the examiner failed to state a *prima facie* rejection in view of *Derocher* and *Koripella*, the examiner has also failed to state a *prima facie* obviousness rejection of claim 10 in view of *Derocher*, *Koripella*, and *Hirsch* when considered as a whole.

Additionally, the inclusion of *Hirsch* to teach only a specific feature included in a dependent claim shows that the examiner is merely picking and choosing elements from the prior art instead of considering the references as a whole. Thus, the examiner again failed to state a *prima facie* obviousness rejection against claim 10.

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C. GROUND OF REJECTION 3 (Claim 11)

For the reasons presented below, the examiner failed to assert a *prima facie* obviousness rejection of claim 11 under 35 U.S.C. § 103(a) over *Derocher*, *Koripella*, and *Peng*. This rejection is predicated upon the faulty combination of *Derocher* and *Koripella*. Given that the examiner failed to state a *prima facie* rejection in view of *Derocher* and *Koripella*, the examiner has also failed to state a *prima facie* obviousness rejection of claim 11 in view of *Derocher*, *Koripella*, and *Peng* when considered as a whole.

Additionally, the inclusion of *Peng* to teach only a specific feature included in a dependent claim shows that the examiner is merely picking and choosing elements from the prior art instead of considering the references as a whole. Thus, the examiner again failed to state a *prima facie* obviousness rejection against claim 11.

D. GROUND OF REJECTION 4 (Claim 13)

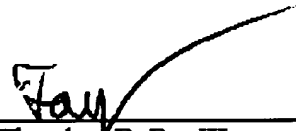
For the reasons presented below, the examiner failed to assert a *prima facie* obviousness rejection of claim 13 under 35 U.S.C. § 103(a) over *Derocher*, *Koripella*, and *Freathy*. This rejection is predicated upon the faulty combination of *Derocher* and *Koripella*. Given that the examiner failed to state a *prima facie* rejection in view of *Derocher* and *Koripella*, the examiner has also failed to state a *prima facie* obviousness rejection of claim 13 in view of *Derocher*, *Koripella*, and *Freathy* when considered as a whole.

Additionally, the inclusion of *Freathy* to teach only a specific feature included in a dependent claim shows that the examiner is merely picking and choosing elements from the prior art instead of considering the references as a whole. Thus, the examiner again failed to state a *prima facie* obviousness rejection against claim 13.

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E. CONCLUSION

The proposed combinations of references do not render the claims obvious, for the reasons presented above. Accordingly, Applicants respectfully request that the Board of Patent Appeals and Interferences overturn the rejections and direct the examiner to allow the claims.



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CLAIMS APPENDIX

The text of the claims involved in the appeal is as follows:

1. A wireless optical navigation device comprising:
an optical position tracking system;
a transmitter electrically coupled to said optical position tracking system; and
a micro fuel cell electrically coupled to said transmitter and said optical position tracking system, said micro fuel cell capable of providing electrical power for said optical position tracking system and said transmitter.
2. The apparatus of Claim 1 wherein said transmitter is an infrared type transmitter.
3. The apparatus of Claim 1 wherein said micro fuel cell is a direct methanol micro fuel cell.
4. The apparatus of Claim 1 wherein said micro fuel cell is a water recycling micro fuel cell.
5. The apparatus of Claim 1 wherein said micro fuel cell comprises a MEMs pump.
6. The apparatus of Claim 1 wherein said micro fuel cell comprises microchannel structures for waste gas removal.

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7. The apparatus of Claim 1 wherein said micro fuel cell comprises microchannel structures for water recovery.
8. The apparatus of Claim 1 further comprising a replaceable fuel cartridge.
9. The apparatus of Claim 8 wherein said replaceable fuel cartridge contains methanol.
10. The apparatus of Claim 8 wherein said replaceable fuel cartridge includes a fuel membrane.
11. The apparatus of Claim 1 further comprising a capacitor that is electrically coupled to said micro fuel cell and said optical position tracking system.
12. The apparatus of Claim 1 further comprising a rechargeable battery that is electrically coupled to said micro fuel cell and said optical position tracking system.
13. The apparatus of Claim 12 wherein said battery is a polymer lithium battery.
14. A method for making a wireless optical navigation device comprising:
providing an optical position tracking system;
providing a transmitter electrically coupled to said optical position tracking system;
and
coupling a micro fuel cell to said transmitter and said optical position tracking system,

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said micro fuel cell capable of providing electrical power for said optical position tracking system and said transmitter.

15. The method of Claim 14 wherein said transmitter is an infrared type transmitter.
16. The method of Claim 14 where said micro fuel cell is a direct methanol micro fuel cell.
17. The method of Claim 14 wherein said micro fuel cell is a water recycling micro fuel cell.
18. The method of Claim 14 wherein said micro fuel cell incorporates a MEMs pump.
19. The method of Claim 14 further comprising providing a replaceable fuel cartridge.
20. The method of Claim 19 wherein said replaceable fuel cartridge is enabled to dispense methanol.

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EVIDENCE APPENDIX

No additional evidence is presented in this appeal brief.

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RELATED PROCEEDINGS APPENDIX

No known related proceedings exist.